




AGRICULTURE

16/4

Paper 4 Alternative to Coursework

Sample Paper

MARK SCHEME

Item	Response	Marks
1 (a)(i) (ii)	Harrowing / Levelling Pull a rake; On cultivated soil; to create a fine tilth / break soil clods;	1 mark 3 marks
(b) (i)	Carrot / beetroot / Spinach / cabbage / Onions / rape / Green peas / green Pepper / tomatoes / AW	1 mark
(ii)	Washing; Sorting / grading; Packaging;	3 marks
2 (a)	Cutworm	1 mark
(b)	Picking by hand; Beat to the ground;	2 marks
3 (a)	Open a shallow furrow along the rows of crops; Place fertilizer in the furrow; Close the furrow; Water to dissolve the fertilizer;	4 marks
(b)	Calculate the amount of fertilizer needed; Weigh the fertilizer; Put on protective clothes;	3 marks
(c)	Ring/banding	1 mark
4 (a)	Clearing / removal of stump / weeds; Digging to break the soil; Breaking soil clods / preparing a fine tilth; adding fertilizer; watering; cultivating to soften the soil; Levelling the soil;	1 mark each for any five points
(b)	 <p>Soil level</p> <p>Concrete bricks</p> <p>Dig the soil' Build wall or concrete base; put soil slab; fill with the soil.</p>	<p>3 marks 1 mark for a diagram 2 marks for labels</p> <p>1 mark each for any 3 points</p>

5 (a)

DATE	ACTIVITY	REASONS FOR ACTIVITY	
02/03/15	Mulching – removal mulching	To prevent pest build up To allow light to enter for photosynthesis To prevent etiolation	Hand
10/03/15	Thinning – remove extra seedlings	Create space for growth. To correct spacing To reduce competition for water, nutrients and light	Hands
10/03/15	Transplanting – transplant Seedlings to permanent plots	Correct spacing	Hand trowel
19/03/15	Cultivation – cultivate the soil	To aerate, loosen the soil	Hand fork
20/03/15	Weeding – removal of weeds, by uprooting or cultivation	To reduce competition between crops + weeds for water, nutrients and light	Hands/hand fork
	Trellising/staking/earthing up	To support weak stems To allow plants to reach sunlight	Stick
	Pruning – remove dead leaves or unwanted parts	To aerate, to prevent spread of diseases, to rejuvenate plants	Pruning shears
20/04/15	Top dressing – apply Inorganic fertilizer	To provide nutrients to the soil/improve soil fertility	
21/01/15	Harvesting – remove mature products	To market the product	Hands

- 2 marks for dates**
- 2 mark for activities**
- 1 mark for reasons**
- 1 mark for tools used**

(b)	$\frac{200 \text{ kg}}{10000\text{m}^2} \times \frac{2\text{m}^2}{1}$ $= \frac{400\text{kg}}{10000\text{m}^2}$ $= 0.04 \text{ kg/m}^2$	A	2 marks	A
(c)	<ul style="list-style-type: none"> - Improves soil structure - contains more nutrients (macro and micro) /AW - It improves soil fertility / AW - Releases nutrients gradually to soil hence less toxic / AW - Easily available and cheap / AW - Prevents leaching from the soil - Improves the aeration and water holding capacity of the soil - Do not cause pollution of the environment 	KU	2 marks	C